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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/448,927	11/24/1999	STEPHEN T. WELLINGHOFF	BTEC-9643	5618
321	7590	08/31/2006	EXAMINER	
SENNIGER POWERS ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102			ANTHONY, JOSEPH DAVID	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/448,927

Applicant(s)

WELLINGHOFF ET AL.

Examiner

Joseph D. Anthony

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06/20/06 as a RCE.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,7-39,41,42 and 44-78 is/are pending in the application.
- 4a) Of the above claim(s) 12-37 and 51-78 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7-11,38,39,41,42 and 44-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

NON-FINAL ACTION AFTER FILING RCE

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1714

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4-5, 7-11, 38-39, 41-42, and 44-50 are rejected under 35

U.S.C. 102(b) as being anticipated by Ripley et al. U.S. Patent Number 5,306,440.

Ripley et al teach and directly claims a tablet capable of generating chlorine dioxide in an aqueous medium comprising a chlorine dioxide precursor capable of generating chlorine dioxide when exposed to a transition metal, a transition metal component effective to promote the generation of chlorine dioxide from said chlorine dioxide precursor in an aqueous medium at a pH in the range of about 6 to about 10, and a buffering component in an amount effective to maintain the pH of the aqueous medium in which said tablet is released in the range of about 6 to about 10, said buffering component being effective to increase the rate of chlorine dioxide generation from said chlorine dioxide precursor relative to a similar tablet without said buffering component, wherein said tablet contains sufficient chlorine dioxide precursor to produce at least about 0.2 ppm of chlorine dioxide in the aqueous medium in which said tablet is released. A preferred chlorine dioxide precursor is a chlorite salt, and preferred transition metal components are platinum or ruthenium or palladium or iridium or osmium or rhodium, which are preferably in the form of inorganic compounds such as metal oxides, see abstract, column 5, lines 18-30, the examples and the claims. Applicant's claims are deemed to be directly anticipated over the patent's disclosure, see especially the claims, and note that examples 1 and 10 directly teach that the

Art Unit: 1714

transition metal catalyst are in the form of their metal oxides. The fact that Ripley et al. do not disclose exposing the taught composition to electromagnetic energy is deemed to be moot since applicant's claims are drawn to a composition and not to a method of generating a gas. Furthermore, Ripley et al's compositions are deemed to be capable of generating and releasing gas when exposed to a sufficient amount of electromagnetic energy.

4. Claims 1-2, 4-5, 7-10, 38-39, 41-42, and 44-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Rubin et al. U.S. Patent number 4,561,994.

Rubin et al. teach a stable, surfactant-free, aqueous hypochlorite paste readily dispersible in hot or cold water, thickened with non-reactive inorganics without having alkali metal silicates, providing up to 10% available chlorine and with a viscosity ranging from about 25,000 to about 2,000,000 CPS, see abstract. Metal oxides, such as zinc oxide and titanium dioxide are directly taught as thickeners, see column 1, lines 47-68 and column 2, lines 39-57. Applicant's claims are deemed to be directly anticipated over Examples VII, IX, X and the claims. The fact that Rubin et al. do not disclose exposing the taught composition to electromagnetic energy is deemed to be moot since applicant's claims are drawn to a composition and not to a method of generating a gas. Furthermore, Rubin et al's compositions are deemed to be capable of generating and releasing gas when exposed to a sufficient amount of electromagnetic energy.

Art Unit: 1714

5. Claims 8-10, and 46-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshida U.S. Patent Number 5,883,330.

Yoshida teaches dry granular gas generating compositions which are capable of significantly reducing the concentration of harmful gas components, particularly carbon monoxide, in the generated gas. Also a process for molding a gas generating composition in a suitable shape with high efficiency without a risk of explosion, fire or the like, the process being capable of producing a durable and firm molded gas generating composition. The gas generating composition of the invention contains an oxide-based catalyst comprising at least two members selected from the elements of Groups I, IV, V, VI, VII and VIII in the periodic table in addition to the nitrogen-containing organic compound and the oxygen-containing inorganic oxidizing agent both essentially incorporated in the gas generating composition. The invention also provides a process for molding a gas generating composition, the process comprising the steps of adding 5 to 20% by weight of water to a gas generating composition essentially containing a nitrogen-containing organic compound and an oxygen-containing inorganic oxidizing agent such as nitrites (e.g. sodium nitrite) or an oxyhalogen acid salt and further containing an oxide-based metal catalyst to give a wet mixture, granulating the wet mixture into wet granules, drying the wet granules to provide a discrete preparation and compression-molding the discrete preparation, see abstract, column 4, lines 37-55, column 5, lines 8-55, and column 6, lines 36-45. Applicant's claims are deemed to be directly anticipated over the Examples in the patent. The fact that Yoshida does not disclose exposing the taught composition to electromagnetic energy is deemed to be

Art Unit: 1714

moot since applicant's claims are drawn to a composition and not to a method of generating a gas. Furthermore, Yoshida's compositions are deemed to be capable of generating and releasing gas when exposed to a sufficient amount of electromagnetic energy.

6. Claims 1-2, 4-7, 11, 38-39, 41-42, 44-45, and 50 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yoshida U.S. Patent Number 5,883,330.

Yoshida has been described above and is deemed to anticipated applicant's claimed invention when the oxygen-containing inorganic oxidizing agent used is a nitrite (e.g. sodium nitrite) or a chlorite type oxyhalogen acid salt, see column 4, lines 37-43. In the alternative, applicant's claims can be said to differ from Yoshida in that there is no direct teaching (i.e. by way of a specific example) to where the oxygen-containing inorganic oxidizing agent used is a nitrite (e.g. sodium nitrite) or a chlorite type oxyhalogen acid salt. It would have been obvious to one having ordinary skill in the art to use the directly disclosure of Yoshida's column 4, lines 37-43 as strong motivation to actually use a nitrite (e.g. sodium nitrite) or a chlorite type oxyhalogen acid salt as the oxygen-containing inorganic oxidizing agent. The fact that Yoshida does not disclose exposing the taught composition to electromagnetic energy is deemed to be moot since applicant's claims are drawn to a composition and not to a method of generating a gas. Furthermore, Yoshida's compositions are deemed to be capable of generating and releasing gas when exposed to a sufficient amount of electromagnetic energy.

Art Unit: 1714

Claims 1-2, 4-5, 7-11, 38-39, 41-42, 44-50 rejected under 35 U.S.C. 102(b) as being anticipated by Matsumoto et al. U.S. Patent Number 5,108,649 or Okuda et al. U.S. Patent Number 5,330,661 or Ringo U.S. Patent Number 5,008,096 or Schenck U.S. Patent number 5,753,106.

7. Claims 1-2, 4-5, 7-11, 38-39, 41-42, and 44-50 rejected under 35 U.S.C. 102(b) as being anticipated by Matsumoto et al. U.S. Patent Number 5,108,649.

Matsumoto et al teaches preserving agent and method and container for preserving fresh marine produce. The preserving agent comprises: (A) at least one salt selected from the group consisting of chlorates, **chlorites** and hypochlorites, (B) iron powder and (C) at least one transition metal oxide, see abstract and claims 1-3. Please note that applicant's claims are anticipated over Example 2 which teaches a preserving agent that comprises **sodium chlorite**, iron powder, **ferric oxide** and active carbon.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

Art Unit: 1714

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-2, 4-5, 7-11, 38-39, 41-42, and 44-50 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of copending Application No. 11/299,126. Although the conflicting claims are not identical, they are not patentably distinct from each other because there is massive overlap in the claimed subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Claims 1-2, 4-5, 7-11, 38-39, 41-42, and 44-50 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 15, 20-21, 28, 38, 43-44, 51, 61 and 66-67 of copending Application No. 10/712,216. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application overlap/encompass the scope of the pending claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

11. Applicant's arguments filed with the After-Final amendment and the 37 CFR 1.132 Declaration, both filed on 03/20/06, and now entered by request of applicant's RCE filed on 06/20/06, have been fully considered but are not persuasive to put the application in condition for allowance for the reasons set forth above. Additional examiner comments are set forth next. All the above rejections, except for the rejection under Matsumoto et al. U.S. Patent Number 5,108,649, are new rejections for the present office action and were thus not addressed by applicant's remarks in said After-Final amendment and 37CFR 1.132 declaration. The prior-art rejection made over Matsumoto et al. U.S. Patent Number 5,108,649 is still deemed to be valid because Mr. Stephen T. Wellinghoff's 37 CFR 1.132 declaration stated on page 4, lines 21-25: *"Finally, if any chlorine dioxide were generated, it would immediately react with Fe or Fe⁺² because of the very high oxidation potentially of chlorine dioxide: . . . Therefor, the system utilized by Matsumoto would not produced chlorine dioxide and, in any case would consume any that was produced."* Mr. Wellinghoff thus admits that chlorine dioxide may be produced by Matsumoto et al's composition. It is totally irrelevant in regards to the patentability of applicant's claims if the chlorine dioxide produced by Matsumoto et al's composition is subsequently consumed or reacts with Fe or Fe⁺² even if this happens in milliseconds. Applicant's pending claims only require that the claimed composition is capable of producing a gas when activated by electromagnetic energy. What happens to the gas once produced is a totally moot issue.

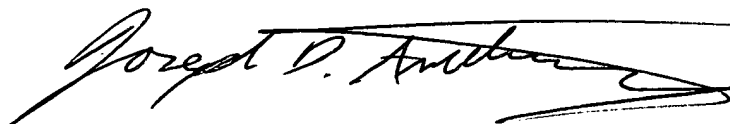
Art Unit: 1714

Prior-Art Cited But Not Applied

12. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

Examiner Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The centralized FAX machine number is (571) 273-8300. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.



Joseph D. Anthony
Primary Patent Examiner
Art Unit 1714

8/28/06